D-100 Voltoid

Ideal for applications where long exposure to high humidity or moisture is not anticipated

APPLICATIONS

Smoke Detector:
Internal Insulator; between foil shields and circuit boards; it can also be formed into a smoke channel for the photoelectric cell.

Microwave Oven:
Foil line air ducts, in which the foil acts as a moisture barrier and the D-100 side acts as a formable electrical, flame and heat barrier.

Flourescent Lamp:
Terminal spacer/insulator

Electrical Appliance:
Accessibility panel as well as an electrical and flame barrier material.

Power Supplies:
Foil laminated enclosures which function as EMI/ESD barriers.

Impact Matrix Printers:
Open cell foam laminated sound dampening panels.

Interface Solutions

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Voltoid® D-100 is an economical electrical and flame barrier, including Underwriters Laboratories’ flame class rating of 94 V-0. D-100 is recommended for applications where long exposure to high humidity is not anticipated. It is a versatile material which can be riveted, stitched, stapled, and formed.

## Voltoid Typical Data Structural/Electrical Insulation Materials

### Flame Retardant Materials

#### D-100
- Widely used in appliances for its economical combination of properties, including UL 94 V-0
- **Properties:**
  - Dielectric Strength: 1.10
  - Temperature Index, Short Term: 12,000
  - Temperature Index, Long Term: 7,000
  - Flammability: V-0
  - 90° Char: 90
  - 90° Char Index: 200
  - Thickness: 0.031”
  - Density: 1.05
  - **Notes:**
    - Dielectric strength determined according to ASTM D 149, short term method, using type 1 electrodes.

#### D-225
- Superior electrical performance and flame retardance in a competitively priced barrier material.
- **Properties:**
  - Dielectric Strength: 1.10
  - Temperature Index, Short Term: 11,000
  - Temperature Index, Long Term: 7,000
  - Flammability: V-0
  - 90° Char: 90
  - 90° Char Index: 225
  - Thickness: 0.031”

#### S-350
- Cost-effective flame retardant sheet, suitable for flat and some formed parts.
- **Properties:**
  - Dielectric Strength: 0.95
  - Temperature Index, Short Term: 9,000
  - Temperature Index, Long Term: 4,000
  - Flammability: V-0
  - 90° Char: 90
  - 90° Char Index: 170
  - Thickness: 0.020”

#### V-090
- A medium density material used primarily as a flexible composite electrical insulator.
- **Properties:**
  - Dielectric Strength: 1.04
  - Temperature Index, Short Term: 1,500
  - Temperature Index, Long Term: 1,150
  - Flammability: 5VA
  - 90° Char: 50
  - 90° Char Index: 120
  - Thickness: 0.015”

#### HP-450
- A sheet-based material designed to provide superior flame barrier properties and dimensional stability at elevated temperatures.
- **Properties:**
  - Dielectric Strength: 1.55
  - Temperature Index, Short Term: 4,500
  - Temperature Index, Long Term: 3,500
  - Flammability: 5VA
  - 180° Char: N/A
  - 180° Char Index: 350
  - Thickness: 0.015”

### Notes:
- Typical values are based on 0.031” product.
- Dielectric strength determined according to ASTM D 149, short term method, using type 1 electrodes.
- Independent laboratory tests on motorette systems have indicated that Voltoid HP-450 is capable of 180°C upper use temperatures.

Please understand that you are responsible for the accuracy of all project specifications, including any Interface Solutions guide specifications that you use. Interface Solutions shall not be liable for any damages arising out of the use of any of its guide specifications.

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